

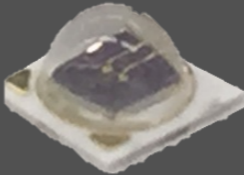
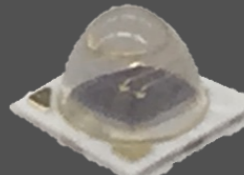
# RECOGNIZING

## High power IR LED with Lens 高出力赤外レンズ付きLED

Reference Exhibit  
参考展示

### Super High Power IR LED

- There are a Wide type(120 degree angle) and a Narrow angle (90 degree angle) by a lens shaped difference.
- レンズ形状の違いにより、配光120°の広配光タイプと、90°の狭配光タイプあり

Item	Mark	Condition	Wide type	Narrow type	Unit
					
Half Intensity Angle	$\Delta\theta$	—	<b>120</b>	<b>90</b>	deg.
Peak Wavelength	$\lambda_p$	IF=1A	<b>940</b>	<b>940</b>	nm
Radiant Intensity	$I_E$	IF=1A	<b>340</b>	<b>430</b>	mW/sr
Total Power	$P_o$	IF=1A	<b>1,280</b>	<b>1,280</b>	mW
Forward Voltage	$V_F$	IF=1A	<b>3.0</b>	<b>3.0</b>	V
Spectrum Half Width	$\Delta\lambda$	IF=1A	<b>50</b>	<b>50</b>	nm

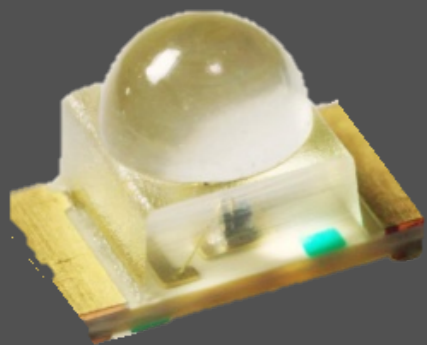
# RECOGNIZING

# High power IR LED with Lens 高出力赤外レンズ付きLED

## Chip type Middle Power IR LED

*Under development*

- This small size chip type LED achieves an equivalent radiant intensity to PLCC with lens type.
- 小型のチップタイプパッケージながら、PLCCレンズ付き同等クラスの放射強度を実現



JGN1105H

L2.5xW1.6xH1.85  
(mm)



Item	Mark	Condition	JGN1105H	Unit
Half Intensity Angle	$\Delta\theta$	IF=50mA	30	deg.
Peak Wavelength	$\lambda_p$	IF=50mA	850	nm
Radiant Intensity	$I_E$	IF=50mA	50	mW/sr
Total Power	$P_o$	IF=50mA	30	mW
Forward Voltage	VF	IF=50mA	1.5	V
Spectrum Half Width	$\Delta\lambda$	IF=50mA	35	nm
Operating Temperature	$T_{opr}$	—	-30~+85	°C
Storage Temperature	$T_{stg}$	—	-40~+100	°C

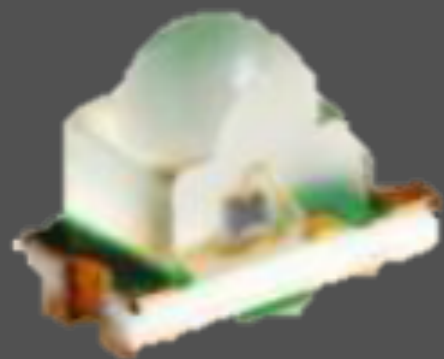
# RECOGNIZING

## High power IR LED with Lens 高出力赤外レンズ付きLED

Under development

### Small size Chip type IR LED

- The radiant intensity approximately 4 times of conventional 1608 size & lambertian distribution angle product.
- Equivalent to JEDEC MSL3
- 従来の1608サイズ、ランバーシアン配光LEDよりも、約4倍の放射強度UP
- JEDEC MSL3相当



VTAN1116P

L1.64xW0.8xH1.26  
(mm)



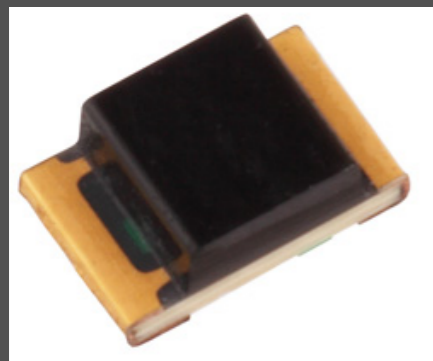
Item	Mark	Condition	VTAN1116P	Unit
Half Intensity Angle	$\Delta\theta$	IF=20mA	40	deg.
Peak Wavelength	$\lambda_p$	IF=20mA	940	nm
Radiant Intensity	$I_E$	IF=20mA	2.8	mW/sr
Total Power	$P_o$	IF=20mA	5.2	mW
Forward Voltage	VF	IF=20mA	1.25	V
Spectrum Half Width	$\Delta\lambda$	IF=20mA	50	nm
Operating Temperature	$T_{opr}$	—	-40~+85	°C
Storage Temperature	$T_{stg}$	—	-40~+100	°C

# RECOGNIZING

# Small size Photo-transistor 小型サイズ フォトトランジスタ

## Chip type Photo-transistor (Photo-detector)

- Wavelength of light receiving sensitivity is 900nm.
- Visible ray cut resin.
- Equivalent to JEDEC MSL3
- 受光感度波長 900nm
- 可視光カット樹脂
- JEDEC MSL3相当



**VTPS1192HB**

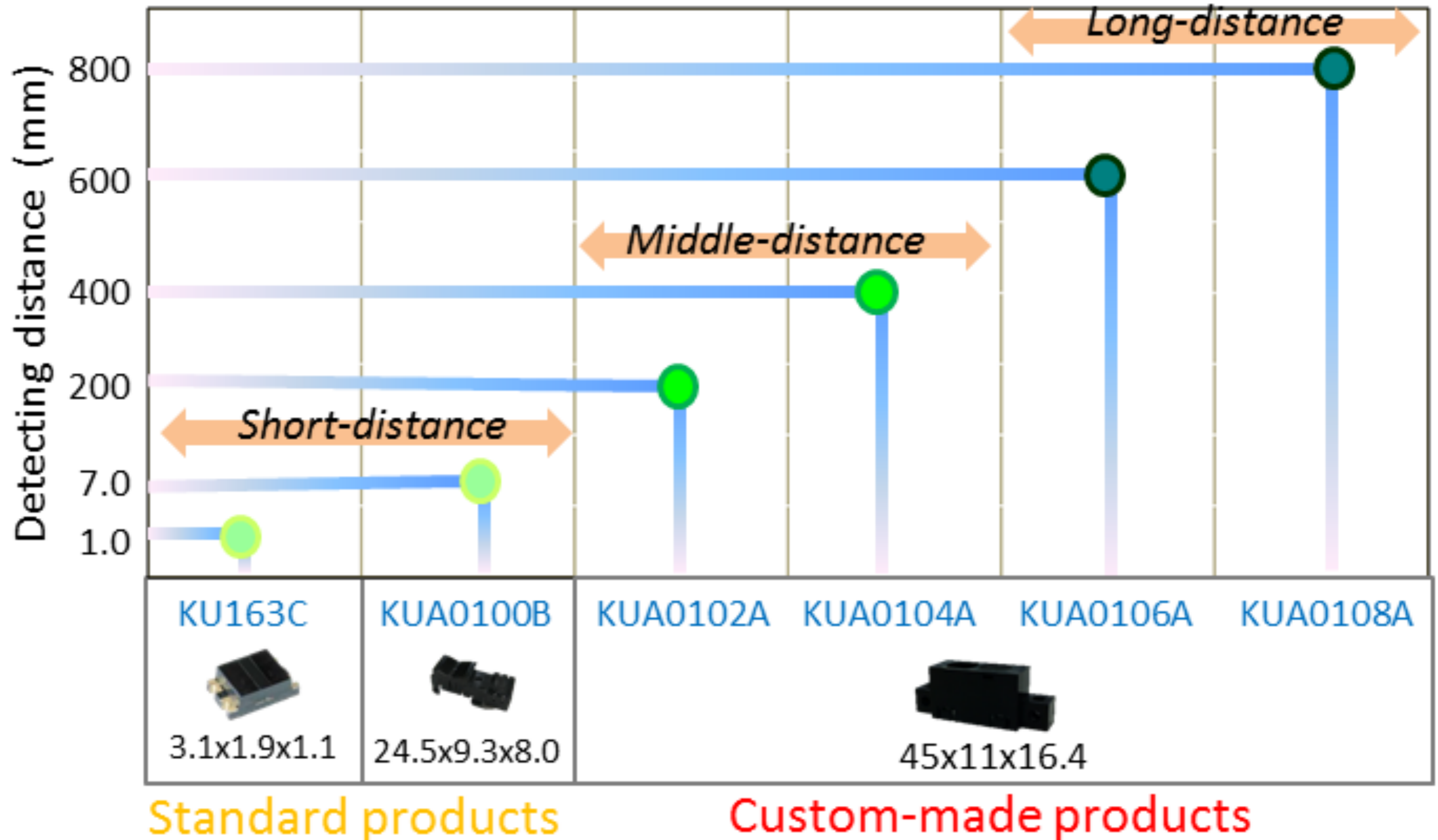
L2.0xW1.25  
xH0.8 (mm)



Item	Mark	Condition	VTPS1192HB	Unit
Dark Current	$I_{CEO}$	$V_{CEO}=10V$	Max.0.1	$\mu A$
Photo Current	$I_c$	$V_{CE}=5V$ $E_e=5mW/cm^2$	1.30	mA
Peak Wavelength	$\lambda_p$	$V_{CE}=5V$	900	nm
Collector-Emitter Saturation voltage	$V_{CE(sat)}$	$I_c=0.5mA$ $E_e=10mW/cm^2$	0.10	V
Response Time	tr / tf	$V_{CE}=10V$ $I_c=2mA, R_L=100\Omega$	1.8 / 2.6	$\mu s$
Operating Temperature	$T_{opr}$	—	-40~+85	$^{\circ}C$
Storage Temperature	$T_{stg}$	—	-40~+100	$^{\circ}C$

# RECOGNIZING

## Optical Reflective Sensor 光学式反射型センサ



# RECOGNIZING

## Optical Reflective Sensor 光学式反射型センサ

### Human detecting sensor : KUA010□A series



- Low power consumption by high output adoption of IR LED
- Radio noise measures
- Allowable background light level 3,000lx
- Detection Distance  
200mm(KUA0102A), 400mm(KUA0104A)  
600mm(KUA0106A), 800mm(KUA0108A)

*\*This will be custom specification.*

- 高出力赤外LEDの採用により低消費電力化が実現
- 電波ノイズ対策
- 外乱許容照度 3,000lx
- 検知距離  
200mm(KUA0102A), 400mm(KUA0104A)  
600mm(KUA0106A), 800mm(KUA0108A)

※当該品はカスタム仕様対応製品です。